

REMARKS

A. Background

Claims 1-15 were pending in the application at the time of the Office Action. Claims 1-15 were rejected as being anticipated by and/or obvious over cited art. By this response applicant has cancelled claims 1, 3-5, 7-10, and 12-15, and amended claims 6, 11. As such, claims 2, 6, and 11 are presented for the Examiner's consideration in light of the following remarks.

B. Proposed Amendments

Applicant has herein amended claims 6 and 11 to respectively incorporate the limitations of claims 7 and 12, which previously depended therefrom. As such, applicant submits that the amendments to the specification, drawings, and claims do not introduce new matter and entry thereof is respectfully requested.

C. Claim Objection

Paragraph 4 of the Office Action objects to claim 15 as being a substantial duplicate of claim 13. Inasmuch as claim 15 has been canceled herein, the objection of that claim has been rendered moot.

D. Anticipation Rejections

Paragraphs 5 and 6 of the Office Action reject claims 1-2 under 35 USC § 102(b) as being anticipated by U.S. Patent No. 6,043,940 to Kamiyama et al. (*Kamiyama*). Paragraph 7 of the Office Action rejects claims 6 and 7 under 35 USC § 102(b) as being anticipated by or in alternative under 35 USC § 103(a) as being obvious over *Kamiyama*. Inasmuch as claims 1 and 7 have been canceled

herein, the rejection of those claims has been rendered moot. Regarding claims 2 and 6, Applicant respectfully traverses this rejection.

The Office Action asserts that “Kamiyama et al teaches optical lenses with compositions that include KTaO_3 .” As a direct result of this, the Office Action asserts that “[t]his composition would inherently have a cubic structure because the Li and Nb content are within the ranges cited by applicant in the specification for transition temperature below room temperature.” Applicant concedes that KTaO_3 is one of the materials disclosed by *Kamiyama* as being used in the optical lenses therein but disagrees that the Li and Nb content alone signifies that the KTaO_3 inherently has a cubic structure. In fact, *Kamiyama* only discloses using KTaO_3 that is either orthorhombic (for KTaO_3) or tetragonal [for $\text{K}(\text{Ta}, \text{Nb})\text{O}_3$]. See col. 4, line 56 to col. 5, line 16. As is known in the art, neither of these crystal types is isometric, or cubic. As such, Applicant respectfully submits that *Kamiyama* does not teach or suggest an optical medium or lens comprising “a cubic crystal material comprising KTaO_{3-d} ,” as recited in claims 2 and 6. Furthermore, Applicant can find no mention of any amount of oxygen deficiency disclosed in *Kamiyama*. As such, Applicant respectfully submits that *Kamiyama* also does not teach “the amount of oxygen deficiency d is $0 \leq d < 10^{-7}$,” as recited in claims 2 and 6. Accordingly, Applicant respectfully requests that the anticipation rejection with respect to claims 2 and 6 be withdrawn.

Applicant notes that in the rejection of claims 2 and 6, the Office Action asserts that various elements or limitations are inherent. For example, as noted above, in the rejection of claim 2 the Office Action asserts that “[t]his composition would inherently have a cubic structure ...” *Emphasis added*. Furthermore, in the rejection of claim 6 the Office Action asserts that “*Kamiyama et al* teaches a lens ... that would inherently have a refractive index that meets the limitation of claims 6 and

7,” and “the Kamiyama lenses would inherently have this transmission property.” *Emphasis added.* Applicant respectfully notes that inherency is not readily established.

For example, as noted in MPEP § 2112, the Examiner must provide rationale or evidence showing inherency. In particular, “The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic.” *In re Rijckaert*, 9 F.3d 1531, 1534 28 USPQ 2d 1955, 1957 (Fed. Cir. 1993) (emphasis in original). Moreover, the Court of Appeals for the Federal Circuit has noted that “To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described by the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a thing may result from a given set of circumstances is not sufficient’.” *In re Robertson*, 169 F.3d 743, 745, 49 USPQ 2d 1949, 1950-51 (Fed. Cir. 1999) (emphasis added).

Finally, “In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” *Ex Parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

In light of the foregoing discussion, Applicant submits that the Office Action has not established the inherency of the above-referenced claim limitations. In fact, as noted above, *Kamiyama* actually teaches away from what the Examiner considered to be inherent in claim 2.

E. Obviousness Rejections

Paragraphs 8-12 of the Office Action reject claims 3-5 and 8-10 under 35 USC § 103(a) as being obvious over *Kamiyama* and/or *Hofmeister*. Inasmuch as claims 3-5 and 8-10 have been canceled herein, the rejections of those claims has been rendered moot.

Paragraph 13 and 14 of the Office Action reject claims 11-15 under 35 USC § 103(a) as being obvious over *Kamiyama* in view of U.S. Patent No. 6,559,084 to Fujikawa et al. (*Fujikawa*). Inasmuch as claims 12-15 have been canceled herein, the rejection of those claims has been rendered moot. Regarding claim 11, Applicant respectfully traverses this rejection.

Fujikawa was merely cited for allegedly disclosing forming prism shapes out of a particular type of $\alpha\beta\text{O}_3$ material. Applicant submits that *Fujikawa* does not cure the deficiencies of *Kamiyama* cited above. That is, *Fujikawa* also does not disclose or suggest “a cubic crystal material comprising KTaO_{3-d} , where the amount of oxygen deficiency d is $0 \leq d < 10^{-7}$,” as recited in claim 11. As such, even if, *arguendo*, it would have been obvious to combine *Kamiyama* with *Fujikawa* in the allegedly obvious manner set forth in the Office Action, the resulting combination would still not include all of the claim limitations recited in the rejected claims. Accordingly, Applicant respectfully requests that the obviousness rejection with regard to claim 11 be withdrawn

No other objections or rejections are set forth in the Office Action.

G. Conclusion

Applicant notes that this response does not discuss every reason why the claims of the present application are distinguished over the cited art. Most notably, applicant submits that many if not all of the dependent claims are independently distinguishable over the cited art. Applicant has merely

submitted those arguments which it considers sufficient to clearly distinguish the claims over the cited art.

In view of the foregoing, applicant respectfully requests the Examiner's reconsideration and allowance of claims 2, 6, and 11 as amended and presented herein.

In the event there remains any impediment to allowance of the claims which could be clarified in a telephonic interview, the Examiner is respectfully requested to initiate such an interview with the undersigned.

Dated this 12th day of May 2008.

Respectfully submitted,

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